



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:  
**19.09.2007 Bulletin 2007/38**

(51) Int Cl.:  
**G01F 1/66 (2006.01)**

(43) Date of publication A2:  
**31.08.2005 Bulletin 2005/35**

(21) Application number: **05003985.8**

(22) Date of filing: **24.02.2005**

(84) Designated Contracting States:  
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR**  
Designated Extension States:  
**AL BA HR LV MK YU**

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(30) Priority: **27.02.2004 JP 2004054264**

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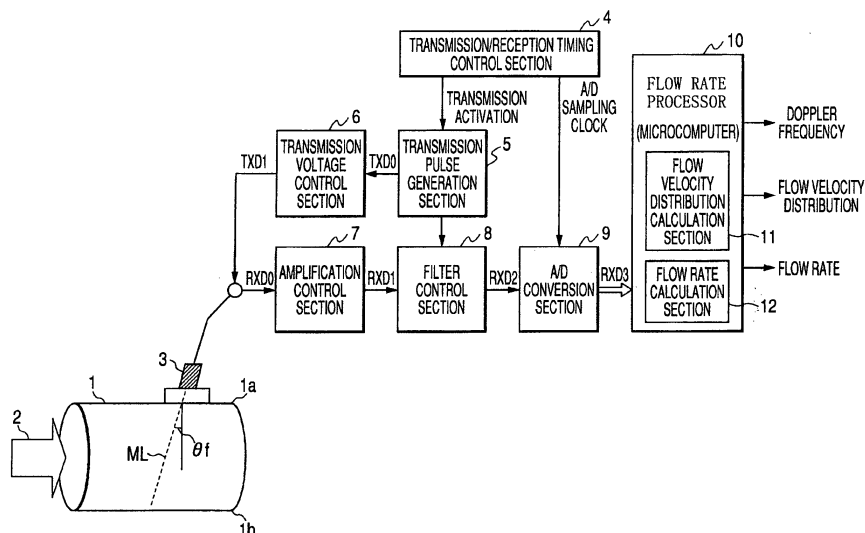
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(54) **Flow rate processor for use in a doppler ultrasonic flowmeter**

(57) An ultrasonic transducer (3) transmits/receives ultrasonic pulses and subjects the resulting received signals to A/D conversion. The resulting data are subjected to a predetermined process in a flow rate processor (10) having a flow velocity distribution calculation section (11) to derive a flow velocity distribution and a flow rate com-

putation processing section (12) to obtain the flow rate therefrom. The calculation of the flow rate in the flow rate computation processing section (12) is performed by using a flow rate calculation equation in which a quantization error of the spatial resolution of the velocity distribution is corrected.

**FIG. 1**





European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number  
EP 05 00 3985

| DOCUMENTS CONSIDERED TO BE RELEVANT                                                                                                                                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                       |                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| Category                                                                                                                                                                                                                | Citation of document with indication, where appropriate, of relevant passages                                             | Relevant to claim                                                                                                                                                                                                                                                                     | CLASSIFICATION OF THE APPLICATION (IPC) |
| E                                                                                                                                                                                                                       | EP 1 701 139 A (TOKYO ELECTRIC POWER CO [JP]) 13 September 2006 (2006-09-13)<br>* the whole document *                    | 1,2,4,5                                                                                                                                                                                                                                                                               | INV.<br>G01F1/66                        |
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|                                                                                                                                                                                                                         |                                                                                                                           |                                                                                                                                                                                                                                                                                       | TECHNICAL FIELDS SEARCHED (IPC)         |
|                                                                                                                                                                                                                         |                                                                                                                           |                                                                                                                                                                                                                                                                                       | G01F                                    |
| The present search report has been drawn up for all claims                                                                                                                                                              |                                                                                                                           |                                                                                                                                                                                                                                                                                       |                                         |
| Place of search<br><b>Munich</b>                                                                                                                                                                                        |                                                                                                                           | Date of completion of the search<br><b>10 August 2007</b>                                                                                                                                                                                                                             | Examiner<br><b>Roetsch, Patrice</b>     |
| CATEGORY OF CITED DOCUMENTS                                                                                                                                                                                             |                                                                                                                           | T : theory or principle underlying the invention<br>E : earlier patent document, but published on, or after the filing date<br>D : document cited in the application<br>L : document cited for other reasons<br>.....<br>& : member of the same patent family, corresponding document |                                         |
| X : particularly relevant if taken alone<br>Y : particularly relevant if combined with another document of the same category<br>A : technological background<br>O : non-written disclosure<br>P : intermediate document |                                                                                                                           |                                                                                                                                                                                                                                                                                       |                                         |

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EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 05 00 3985

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
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10-08-2007

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